

Work Order ID 74228 RH



Page 1

Tuesday, September 27, 2011 12:31:12 PM

Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: ME

Date: 11-09-28

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3804	A
IIN-D206-642	O

100

0.00



DOCUMENT CONTROL

DC

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Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Start Date: 10/3/2011 Start Qty: 1.00



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Customer:

Reference:

Approvals:

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Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Debur Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty ☐ Part Number ☐ Description ☐ BatchA/R ☐ Aluminum Rod ☒ M117884

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Debur

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

> de 11/10/17

> de 11/10/17

} SAO 11-10-21

} SAO 11-10-25

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.

****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

SAD 11-10-26

DL 11/10/27

8 u/10/27

XL

Dart Aerospace Ltd

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Cust Item ID:

THE UNIVERSITY OF CHICAGO

Customer:

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

**Insp.
Stamp**

0.00

[REDACTED]

HandFinish

Memo

0.00

Hand Finishing

DL 4/10/27

0.00

[illegible]

QC

Memo

0.00

Quality Control

NP 11-10-27

0.00

00000000000000000000000000000000

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

11-10-27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Tuesday, September 27, 2011 12:31:12 PM

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Item ID: D206-642-151

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Revision ID:

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Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00

Required Date: 11/4/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/10/27

180

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-3 web in place as per QS1 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 11/10/27 Time: 6:10

Finish Date: 11/10/28 Time: 11:00

Pick:

Qty ☐ Part Number ☐ Description ☐ BatchA/R ☐ Sikaflex-291 ☐ 119389 ☐

Sikaflex expire date: 12/08/13

BE 11/10/27

BB

11/10/27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

11-10-28

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200

0.00



Skidtubes

Skidtubes

Memo

0.00

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty ☐ Part Number ☐ Description ☐ BatchA/R ☐ Aluminum Rod ☒ MIL7084

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/R ☐ SS Rod ☒ NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

S BE 11/10/28

B 11/10/29

BE 11/10/31

DP 11-10-31

Dart Aerospace Ltd

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Accept

[illegible]**Setup Start**

Stop

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Run Start

Stop

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

Plan

Accept Qty

Reject
Qty

Reject Number

Insp. Stamp

0.00

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

Install D2680-041 Nut Plate as per Dwg D3804

0.00

[illegible]

QC9- Inspect visual per QSI004- Fusion Welds

0.00

QC

Memo

Quality Control

0.00

RESEARCH DESIGN

QC10- Inspect visual per QSI004- ground welds

0.00

QC

Memo

Quality Control

Dart Aerospace Ltd

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<i>m</i>	<i>11</i>	<i>11</i>	<i>01</i> (1)
240 HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo	0.00 0.00							<i>IX m 11/11/02</i>
250 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: <i>2:30</i> OVEN TEMPERATURE: <i>3200F</i> FINISH TIME: <i>3:00</i>	0.00 0.00							<i>IX m 11/11/02</i>

m118439

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID 74228 RH

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Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00							
Quality Control									
270	HandFinishing	0.00							
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								

1 RH d JH 11/4/103

1 RH d JH 11/4/103

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Work Order ID 74228

Tuesday, September 27, 2011 12:31:12 PM

Page 11

Item ID: D206-642-151

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280  HandFinish	HandFinishing	0.00				194	0	11/11/11	
Hand Finishing	<p>Memo</p> <p>1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/R <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> <u>11/18/99</u> <input type="checkbox"/> Sikaflex expire date: <input type="checkbox"/> <u>12/10/00</u></p> <p>2- Install wearplate as per dwg</p> <p>2-Wing Walk as per Dwg D3804 and QSI 005 4.4 <input type="checkbox"/> Batch: <u>11/18/98</u></p>	0.00							
290  QC	QC3- Inspect Part Finish	0.00							
Quality Control	Memo	0.00							

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 74228

Page 12

Tuesday, September 27, 2011 12:31:12 PM

Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
			Suluks			+124			
310 Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D206-642-151 Location: _____ PPP Rev: _____	0.00 0.00							
			PPP 74363			11/11/16			
320 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							
						11/11/17			
						ME 11-11-16			

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Tuesday, September 27, 2011 12:31:08 PM

Page 1

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620

Manufactured

No

110

Each

23.0000

1

1



Skidtube, 206 Skidtube

Location

Loc Qty

Loc Code

LG

23

71616

5

71617

6

73781

5

73786

3

73787

4

D2647

Manufactured

No

110

Each

36.0000

1

1



Cap

Location

Loc Qty

Loc Code

LG002

36

55352

8

71171

28

CR3212-4-04

Purchased

No

180

Each

10,997.00

52

52



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

997

116471

78

117816

179

118686

1

118840

739

ST516

10000

119017

10000

DC
11/10/17

BE 11/10/17
373826 x1

BE 11/10/27

52

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Tuesday, September 27, 2011 12:31:08 PM

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2654-1
Web
Manufactured No

180 Each

12.0000

1

73798



11/10/27

Location

Loc Qty

Loc Code

LG

12

73789

10

73790

2

D3286-1
Doubler
Manufactured No

180 Each

80.0000

2

2



SAD 11/10/25

Location

Loc Qty

Loc Code

LG002

80

64563

6

74111

74

B74441

2

D2649
Cross Bolt Spacer
Manufactured No

200 Each

1,995.000

19

19



BE 11/10/28

Location

Loc Qty

Loc Code

LG

736

68224

2

71355

2

72704

2

72841

130

73855

600

LG001

1259

65317

1

68507

11

73390

47

73857

600

73860

600

19

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3286-3 Manufactured No

200 Each

98.0000

2 2



Spacer

Location

Loc Qty

Loc Code

LG001

83

74117

83

LG002

15

64564

15

D2680-041 Manufactured No

210 Each

40.0000

1 1



Nut Plate

Location

Loc Qty

Loc Code

LG

73854

40

73334

40

CR3212-4-03 Purchased No

210 Each

2,116.000

2 2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

110139

2

ST311

1114

114859

1114

ST318

1000

119017

1000

AN960JD416 NAS1149D0463J Purchased No

210 Each

0.0000

1 1



Washer

*

BE 10/31
874439 x2

① DP 11-10-31

② DP 11-10-31

x1118384(x1) ul ulul05

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries
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Picklist Print

Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

210

Each

1,401.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

399

117086

21

117849

378

ST317

1000

119017

1000

② DP 11-10-31

MS27039-4-06

Purchased

No

210

Each

29.0000

1

1



Screw

Location

Loc Qty

Loc Code

FP-A

8

115460

8

ST292

21

115460

21

1119124

X1

D2651-1

Manufactured

No

270

Each

289.0000

6

6



Plug

Location

Loc Qty

Loc Code

fpa

109

69018

109

FP-A

180

57869

1

66445

10

67760

36

70691

100

70839

2

71037

31

1373827

V6

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Picklist Print

Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2651-3

Manufactured No

270

Each

1,799.000

6

6



O-Ring



u 11/10/11

Location

Loc Qty

Loc Code

FP-A

1799

61962

12

66956

282

73489

505

73828

1000

x6

D3873-1

Manufactured No

280

Each

599.0000

14

14



Bushing



u 11/10/11

Location

Loc Qty

Loc Code

ST084

4

68247

4

ST088

595

64760

1

70690

47

71837

87

73399

60

73829

400

B73830

x11

B73831

x3

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No

280 Each

87.0000 1 1



Aft Cap



44 11/11/03

Location

Loc Qty

Loc Code

FP004

43

B73294

X1

68280

43

FP006

5

62678

5

FP-4

35

70945

1

71070

34

fp5

4

71038

4

D3805-041 Manufactured No

280 Each

0.0000 1 1



Wearplate Assembly Fwd, Low Gear

MS27039-1-08

Purchased No

280 Each

1,216.000 2 2



Screw



B75942 (vi) 44 11/11/03

44 11/11/03

Location

Loc Qty

Loc Code

ST291

1216

115108

16

117423

300

118378

400

118910

500

X2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Picklist Print

Page 7

Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

280

Each

8,411.000

7

7



Nut



u u u u 03

Location

Loc Qty

Loc Code

ST300

2411

117441

16

117601

240

117885

155

118451

1000

118927

1000

ST516

6000

119017

6000

X 7

D3805-045

Manufactured

No

280

Each

6.0000

1

1



Wearplate Assembly Aft, Low Gear



B74938 (x1) M u u u 15

Location

Loc Qty

Loc Code

FP

6

70878

6

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2



Washer



M 117087 (x2) M u u u 03

AN3-37A

Purchased

No

280

Each

261.0000

7

7



Bolt



u u u u 03

Location

Loc Qty

Loc Code

ST353

211

111668

111

118628

100

ST354

50

117619

50

V 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Tuesday, September 27, 2011 12:31:09 PM

Work Order ID: 74228



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

280

Each

4,404.000

7

7



462

11/4/07

Washer

Location

Loc Qty

Loc Code

ST298

4404

117601

274

118077

1130

118612

1000

118968

2000

✓ 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

#74228

RELEASED
09.03.03
per ECR 09-530

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	91		
DRAWN	91		
CHECKED	91		
MFG. APPR.	91		
APPROVED	91		
DE APPR.	91		
DATE	08.07.07		

DART AEROSPACE USA, INC	
PORT HADLOCK, WA	
DRAWING NO.	REV. A
D3804	SHEET 1 OF 5
TITLE	SCALE
SKIDTUBE ASSEMBLY, 206A/B	NTS

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

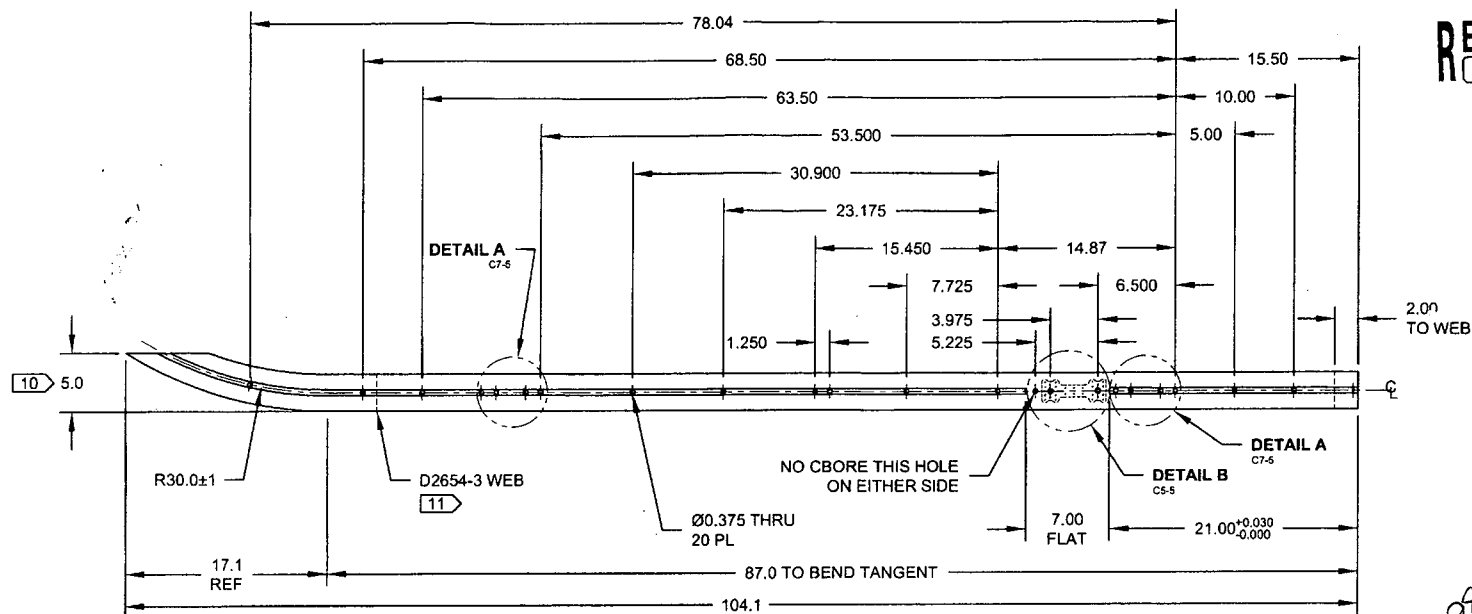
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

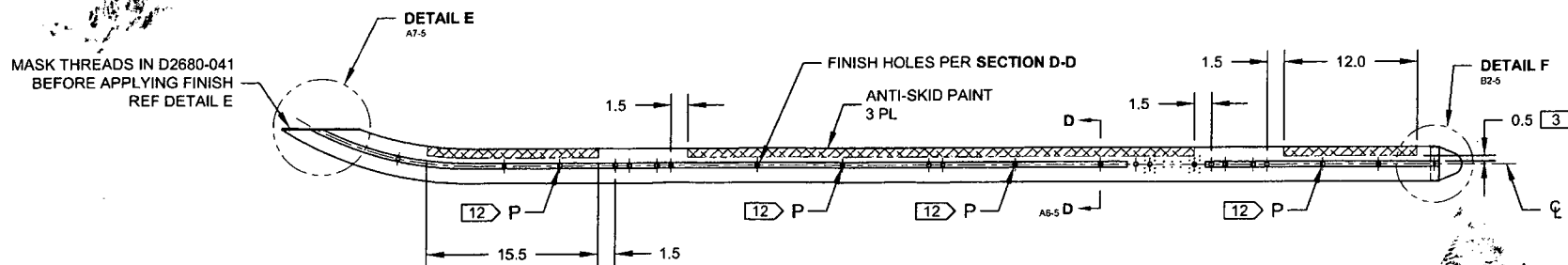
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RELEASED
09-03-03



D3804-043 BENDING/DRILLING DETAIL

#74228



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO. D3804	REV. A
MFG. APPR.	97	SHEET 3 OF 5	
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

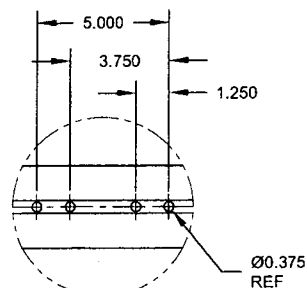
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

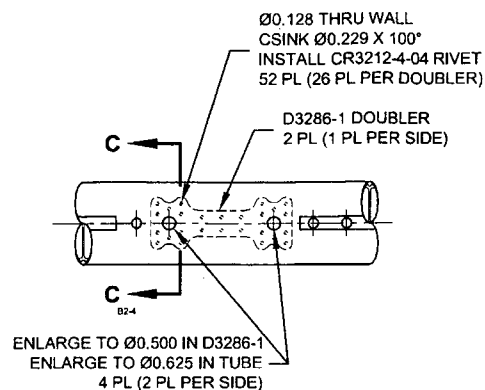
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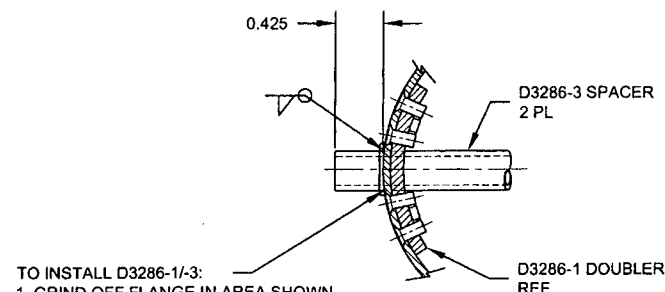
RELEASED
UP 04.03.07



DETAIL A D6-2
C2-2
D6-3
C2-3
SCALE NONE

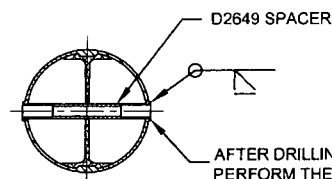


DETAIL B C3-2
C3-3
SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C C6-4
PARTIAL SECTION
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

SECTION D-D A4-2
A4-3
FOR Ø0.375 HOLES ONLY
SCALE NONE

DESIGN	97	DART AEROSPACE USA, INC	
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MFG. APPR.	97	D3804	SHEET 4 OF 5
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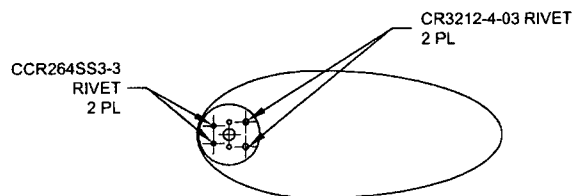
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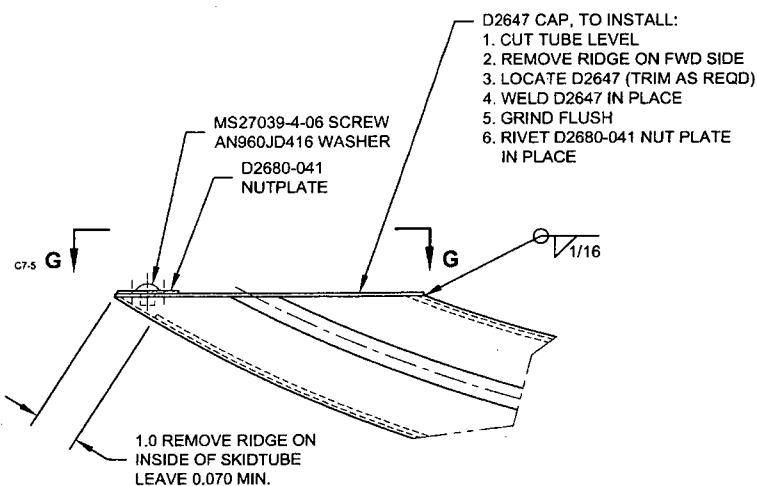
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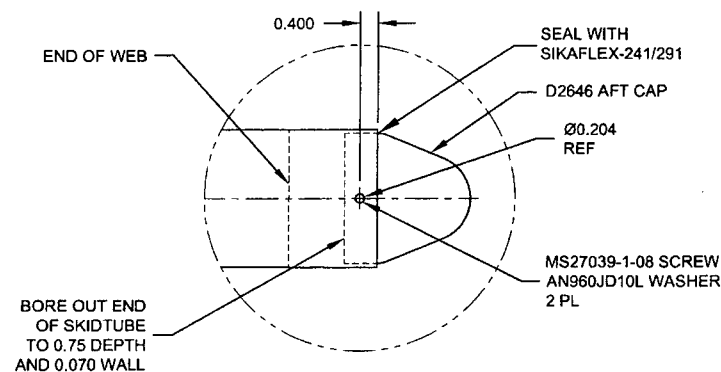
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VIEW G-G
SCALE NONE A7-5



DETAIL E
SCALE NONE B7-2 B7-3



DETAIL F
SCALE NONE B2-2 B2-3

DESIGN	91	DART AEROSPACE USA, INC	
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CHECKED	2	DRAWING NO. D3804	REV. A SHEET 5 OF 5
MFG. APPR.	3	TITLE	SCALE
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